



Attitudes and Preferences of People Aged 55 and Above for Seafood: Summary of Telephone Survey Results¹

Lisa House, Allen F. Wysocki, William A. Messina, Jr., and Kathryn Olson²

Introduction

Seafood contains nutritionally valuable nutrients, the most notable of which is Omega-3 fatty acids. The benefits of Omega-3 fatty acids have been thoroughly studied, with research showing they can help lower blood pressure, reduce the chance of heart disease, and reduce the incidence of dementia and Alzheimer's disease. The case for these benefits is strong enough that many of the U.S. premiere health organizations recommend the consumption of seafood as a preventative measure for disease. The American Heart Association recommends the consumption of seafood at least twice a week to prevent heart disease and as a benefit for those who have heart disease. In addition, the Alzheimer's Association recommends the consumption of cold-water fish species to help prevent Alzheimer's disease.

Although the health benefits of seafood are well documented, the manner in which information about its good effects reach consumers aged 55 and older is

less well known, and it is unclear how the messages influence older consumers' seafood consumption decisions. While significant research has been conducted on seafood consumption, little of it has focused on the 55 and above age group, an age group with much potential to gain from the consumption of seafood. The seafood industry would benefit from a more thorough understanding of the nutritional preferences and buying habits of this age group.

Specifically, the seafood industry could increase its profit potential if it knew more about issues such as the frequency of seafood consumption, where seafood is purchased or consumed, preferences in how seafood is prepared, and information and beliefs about the health benefits and risks of seafood consumption. A better understanding of these and related issues could generate industry changes to improve consumers' seafood consumption experiences and health.

In 2008, with support from the Florida Department of Agricultural and Consumer Services,

1. This is EDIS document FE822, a publication of the Food and Resource Economics Department, Florida Cooperative Extension Service, Institute of Food and Agricultural Sciences, University of Florida, Gainesville, FL. Published April 2010. Please visit the EDIS Web site at <http://edis.ifas.ufl.edu>.

2. Lisa House, professor and director of Florida Agricultural Market Research Center (FAMRC); Allen F. Wysocki, associate professor and coordinator of Agribusiness Masters program; William A. Messina, Jr., economic analyst, Florida Agricultural Market Research Center (FAMRC); and Kathryn Olson, graduate student, Food and Resource Economics Department, Florida Cooperative Extension Service, Institute of Food and Agricultural Sciences, University of Florida, Gainesville, FL.

This project was supported by the National Needs Fellowship Program of the Cooperative State Research, Education, and Extension Service, USDA, Grant #2005-38420-15781, and the Florida Department of Agriculture and Consumer Services.

Bureau of Seafood and Aquaculture Marketing, University of Florida researchers administered a survey to Florida residents aged 55 and above on the topic of seafood consumption. The goals of this research were (1) to identify the attitudes and consumption behavior of consumers aged 55 and older for fish, shellfish, and aquaculture products; (2) to develop marketing messages that best use this information; and (3) to identify information channels to most effectively deliver these messages. This document presents a brief summary of information on consumer perceptions of seafood obtained from this survey. The full report is available online at <http://www.agmarketing.ifas.ufl.edu/pubs/2000s/attitudes.pdf>.

Survey Design and Respondent Demographics

The telephone survey was initiated in early April of 2008, and data collection was finalized in May of 2008. The script for the survey was developed through focus groups that were conducted in Hillsborough, Miami-Dade, and Palm Beach Counties, the target area of this study. The focus groups provided insights into consumption patterns and facilitated the construction of the telephone survey. The full report of this research project is available online at http://www.agmarketing.ifas.ufl.edu/pubs/2000s/seafood_perceptions.pdf and a summary of the full focus group report is available online at <http://edis.ifas.ufl.edu/FE821>.

A total of 8,962 households were contacted in Hillsborough, Miami-Dade, and Palm Beach Counties. Of the total households contacted, 1,796 were invalid numbers (i.e., phone disconnected, no resident under the age of 55 available, incorrect county, etc.), leaving 7,166 true attempts. Of these, 597 surveys were successfully completed, creating a response rate of eight percent. The original goal was to complete 200 responses per county; however, response rates in Miami-Dade County were lower than in the other counties, so targets were readjusted, leading to more responses from the other two counties. Distribution of completed surveys across the three counties is shown in Table 1.

Demographic Profile of Respondents

Respondents, by design, were aged 55 and above. In general, as age increased, the number of respondents in the category decreased. The majority of respondents reported they were the only resident of their household aged 55 and above (56%), while another 41 percent indicated there were two people in the household in this age group. Racial and ethnicity profile of the survey respondents closely followed what has been reported by the U.S. Census Bureau for these three counties.

Respondents were predominately female (69%), due in part to the request that the respondent be the primary shopper, and to the fact that in older age groups, females outnumber males (U.S. Census Bureau). Education levels varied widely, and household income was spread among the categories, with fewer people in the higher income categories. It is worth noting that 30 percent of the respondents did not answer the question on income.

One reason for conducting the survey in Florida was the belief that many respondents would be from different regions of the United States, having moved to Florida for retirement (and that this would allow the study results to reflect national perspectives). This belief did prove true, as less than seven percent indicated that they had lived in Florida their entire life. However, 25 percent of the respondents have lived in Florida since they were children, and 20 percent moved to Florida after turning 55 years of age.

Attitude and Value Profile of Respondents

Respondents were initially asked to answer general questions about their opinions on health, nutrition information, and food knowledge. This allowed an analysis of the perceptions of the respondents with respect to these topics. Results are summarized in Tables 2 and 3.

Characteristics and Preferences of Seafood Consumers

Data were collected from consumers and non-consumers of seafood. As with prior studies, approximately 87 percent of the respondents indicated that they consumed some type of seafood, while approximately 13 percent of the respondents indicated that they did not consume any seafood. Seafood consumers were then asked a series of questions about their frequency of seafood consumption and type of seafood consumed, as well as issues that were important to them in choosing seafood. The influence of demographic characteristics also was measured.

Frequency

As expected, people were more likely to consume seafood for lunch and dinner rather than for breakfast. Surprisingly though, a substantial number of consumers indicated that they ate seafood for breakfast—19 percent of consumers indicated that they ate seafood for breakfast at least occasionally, 77 percent indicated that they ate seafood for lunch, and 98 percent indicated that they ate seafood for dinner.

Location of Consumption/Purchase

A majority of respondents purchased seafood from more than one location, although 39 percent purchased seafood at only one location. Breaking down the data for the 39 percent of consumers who purchased seafood at only one location: 9 percent made their last 10 purchases at restaurants, 8 percent at fish markets, 20 percent at grocery stores, and less than 1 percent made each of their last ten purchases of seafood through shipping companies. Meanwhile, 2 percent caught their own seafood for their last 10 seafood consumption experiences.

Probing further into the reasons for the location of consumption or purchase, respondents who purchased fish from fish markets or specialty stores were asked why they chose these locations over grocery stores. The most frequent answer given was freshness, followed by selection and quality. Consumers who purchased seafood at grocery stores were asked what form of seafood they purchased. The most common answer was fresh (73% purchased

fresh seafood at the grocery store), followed by frozen (57%), prepared seafood (20%), and canned (9%).

Race

There were significant differences among racial categories in terms of location where seafood was purchased or consumed. Black respondents were significantly less likely to purchase 100 percent of their seafood from grocery stores than were people of other races, and they were more likely to purchase seafood from specialty stores or fish markets. Additionally, White and Black respondents were more likely than respondents of other races to purchase seafood only at restaurants.

Education

Education level also played a role in where seafood was purchased or consumed. The higher their education level, the more likely respondents were to purchase seafood at grocery stores. Respondents with some college education were more likely than those with no college education to purchase seafood from restaurants, and those with college degrees were most likely to purchase seafood only from restaurants. This may correspond to differences in income. However, the relatively large proportion of the respondents who refused to answer the question on income prevents testing this hypothesis further.

Age

Finally, frequency of seafood purchases at grocery stores varied depending on the age of the respondent. Those in the age group of 85 and above were significantly less likely to purchase seafood from grocery stores. Other locations of purchase did not vary significantly, perhaps implying the oldest group is less likely to shop at the grocery store.

Preparation Types and Methods

More than 86 percent of seafood consumers prepared at least some seafood at home, which included a wide variety of shellfish and finfish. The most commonly consumed shellfish was shrimp (70%), followed by lobster (39%) and crab (32%). For finfish, there were many types of fish identified by the respondents; however, the most common were

salmon (44%), tilapia (38%), grouper (24%), catfish (22%), snapper (21%), and tuna (21%). Preparation methods also varied with fried, baked, and broiled as the most popular for both at-home and away-from-home consumption.

To gain more insight on the types of seafood consumed, respondents were asked if they would be willing to try new types of seafood that they had not previously consumed. A majority (62%) indicated that they would be willing to try new types of seafood, while 33 percent indicated that they would not try new types of seafood and 5 percent were unsure.

Reasons for Seafood Consumption

There were many reasons given as to why consumers ate seafood, with health or nutrition topping the list for over 50 percent of the respondents, followed by 37 percent who indicated that they ate seafood because of the flavor or taste.

The single-most important factor in selecting seafood was freshness, with over 54 percent of the respondents indicating that this was the deciding factor. Other factors varied in importance, these factors garnering 5–10 percent of the total number of responses (price, flavor/taste, color/appearance, smell, health reasons). When asked to list all the factors that influence seafood purchases, price was a factor cited most often as *one* of those factors.

Seafood Origin

An important piece of information for the Florida seafood and aquaculture industry is whether consumers in Florida have a strong preference for Florida seafood. Seafood consumers in the survey were asked if they would purchase seafood if they did not know where it was raised or caught. Almost 50 percent said that they would buy seafood regardless of whether they knew where it was raised or caught, while 45 percent said they would not. Consumers were then asked two follow-up questions rating the importance of knowing where the seafood was raised or caught, and the importance of knowing it was raised or caught in Florida. While 70 percent of respondents indicated it was at least *slightly* important to know where their seafood was raised or caught,

only 51 percent stated that knowing whether the seafood was raised or caught in Florida was slightly or very important. On the opposite end, only 7 percent of respondents indicated that knowing where their seafood was raised or caught was very unimportant, while nearly double that amount, 13 percent indicated it was very unimportant to know that the seafood was from Florida.

When examining the importance to survey respondents of knowing where seafood was raised or caught, there were some differences by race. White respondents were less likely to indicate that knowledge of where seafood was caught or raised in general was slightly or very important. This was even clearer with regard to Florida-produced seafood, with approximately 51 percent of White respondents indicating that this was slightly or very important, compared to 77 percent of Black respondents and 70 percent of respondents of other races. There were no significant differences by education or age level of the respondents.

When asked about differences between wild-caught and farm-raised fish, a majority of consumers (56%) said that there was a difference in taste between wild-caught and farm-raised seafood. The remaining respondents were split between those who felt there was no difference (23%) and those who did not know (20%). Interestingly, nearly half (48%) said that they did not have a preference between wild-caught and farm-raised seafood, with 37 percent of those preferring wild-caught seafood and 11 percent preferring farm-raised.

Consumers were asked how confident they are in the safety of seafood they purchase in general, and how confident they are in the safety of seafood raised in Florida. Although results appear similar, with 75 percent confident (defined as very or slightly confident) in the seafood they purchase, and 69 percent confident in Florida seafood, the difference is statistically significant, with respondents more confident in seafood they purchase in general than in seafood from Florida. Of concern for the Florida industry should be the 8 and 5 percent of respondents who indicated a slight and high lack in confidence in the safety of Florida seafood, respectively, (compared to the 10 and 3 percent for general seafood

purchases). This result was tested to compare responses for those of different race, education, and age backgrounds, but no significant differences were found, indicating that the confidence consumers have in the safety of the seafood they purchase is difficult to predict based on demographics.

Finally, consumers were asked what would increase their consumption of seafood (Figure 1). They were given the choices of recipes, seafood preparation information, TV commercials, talking with specialists at local stores, packaging, promotion of the health advantage of consuming seafood, and other. On their own, many respondents added price and freshness to the list. Results indicated that the items likely to impact the most people were promotion of health advantages of consuming seafood (36%) and recipes (35%). Talking with knowledgeable specialists would help 33 percent of the respondents, and 31 percent of the respondents indicated that more seafood preparation information would be helpful. As has been mentioned in focus groups at the survey design stage, packaging was significant, with 22 percent of respondents indicating that packaging could lead to more purchases. Only 14 percent of respondents indicated that nothing would increase their seafood consumption.

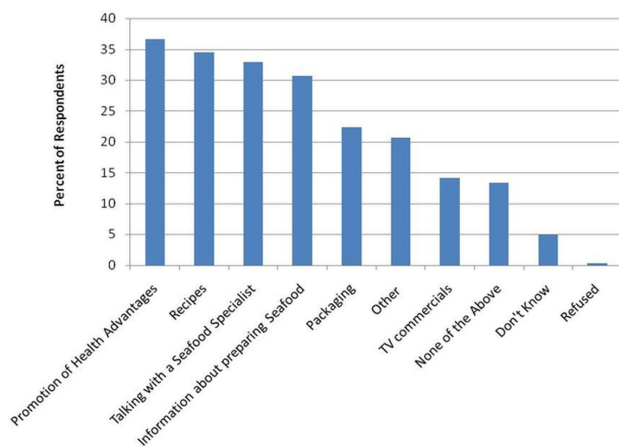


Figure 1. Actions that could increase seafood consumption

Preferences and Attitudes of Non-Seafood Consumers

The respondents (17% of total households) who did not eat seafood were asked a series of questions to develop an understanding of whether they could be converted to being seafood consumers. Non-seafood

consumers said that the primary reason they did not consume seafood was that they (or their spouse) did not like it (20%), plus another 9 percent did not like the flavor or taste, which is likely the same answer. Approximately 18 percent of respondents indicated that they did not consume seafood because of health reasons, with an additional 13 percent not eating seafood due to safety concerns. Of the non-seafood consumers, 66 percent reported that they could never be enticed to eat seafood. Of the 34 percent who indicated that they could be enticed to eat seafood, 26 percent indicated that it would take changes in seafood safety standards to change their behavior; 22 percent indicated that it would take lower prices; 22 percent indicated that recipes would help; and 52 percent had other reasons, such as eliminating allergies or no fish bones (percentages total to more than 100 percent because some respondents gave multiple explanations for what it would take to get them to change their consumption patterns and consume seafood).

Seafood Safety Issues

Both seafood and non-seafood consumers were asked to rate their confidence level in the safety of the seafood they purchase. Nearly 13 percent of the seafood consumers had less than neutral confidence levels in seafood safety, compared to 67 percent of non-seafood consumers. All respondents were asked to identify the fish or shellfish they believe to be the most safe and the least safe. A large proportion of respondents indicated that they did not know which fish was the safest (21%) or least safe (31%). Respondents rated shrimp (15%) and salmon (14%) as believed to be among the safest of seafood choices. Oysters were rated the least safe most frequently (24%), followed by clams (6%). Few respondents considered all seafood as safe (<4%) or unsafe (2%), indicating that people do perceive seafood differently in terms of safety.

Due to concerns about oyster safety perceptions, as verified by this survey, consumers were asked direct questions about their perception of safety in oysters. About 40 percent of the consumers surveyed reported that they ate oysters: 7 percent of these respondents indicated that they only ate raw oysters, 19 percent only ate cooked oysters, and 13 percent ate

both cooked and raw oysters. Approximately 60 percent of the seafood consumers indicated that they do not eat oysters. Of the consumers who did not eat raw oysters, 21 percent indicated safety as the reason and 42 percent indicated that they did not like the taste of oysters. To explore the safety issue further, consumers were asked if they would consume raw oysters if health and safety concerns were reduced or eliminated. Only 17 percent indicated that a higher safety assurance would change their behavior. Less than 5 percent were aware of new processes to reduce the risk in eating raw oysters.

In addition, all respondents were asked if they had safety concerns for seafood other than oysters. Nearly one-third (31%) indicated that they did, while 68 percent indicated that they had no other concerns. Older respondents were less likely to indicate that they had safety concerns for seafood other than oysters. Education was also significant, with those having some college education having more concerns about seafood safety than those with no college education. Analysis of response by race revealed no differences in safety perception.

Respondents were asked what health benefits they perceived from consuming seafood. From this data, we were able to investigate whether or not demographic characteristics were related to perceptions of health benefits. Age was again significantly related, with those under the age of 75 being more likely to perceive health benefits than those over the age of 75. Perceptions of health benefits also increased as the education level increased, with 89 percent of those with a college degree perceiving health benefits from consuming seafood, compared to 62 percent of those with less than a high school degree and 75 percent of those with a high school degree. There were no significant differences with regard to race of the respondents.

Most respondents indicated there was a general health benefit to consuming seafood, or that fish was nutritious (21%), while others referred directly to Omega-3 fatty acids or fish oil (17%) or lower fat content (19%). Some respondents were more focused on the direct health benefits, with 14 percent interested in cholesterol levels, 8 percent interested in heart health, and 8 percent interested in benefits for the brain.

Following up, respondents were asked if their eating behaviors have changed as they have gotten older. In total, 75 percent indicated that their habits have changed, especially those in the 55–74 age group. As education level increased, the likelihood to change behavior also increased, from 62 percent of those without a high school education to 79 percent of those with a college degree.

Information Sources

To target information effectively, respondents were asked where they received their information about seafood and who they would trust to give them that information. People most commonly said they received information from newspapers (27%), television/radio/internet (26%), and magazines (22%). Other major sources of information included reading and cookbooks (12%), word-of-mouth (12%), and asking for help at the store (8%).

When asked who influenced their decision to purchase seafood, nearly three-quarters (74%) said nobody influenced their decision. Of those who did mention having been influenced, family, doctors, media, and friends were discussed. Respondents were also asked who they trusted for information about seafood. Interestingly, the most mentioned person trusted was the person selling the seafood (18%). This was closely followed by nobody influences me (16%), the media (14%), immediate family (8%), themselves (6%), doctors (8%), and the government (4%).

Sustainable Seafood

Only 12 percent of respondents indicated that they knew what the term 'sustainable seafood' meant. Of those, 58 percent indicated a willingness to pay more for sustainable seafood. Those who did not know the term were read the following statement:

Sustainable seafood is the practice of keeping fisheries and the fish they raise healthy and productive through management and responsible harvesting. Knowing this, would you pay extra for it?

Following this statement, 57 percent of those who did not know what sustainable seafood was

indicated a willingness to pay extra for it, and 48 percent felt there should be federal funding available to support sustainable production.

Marketing Message Recommendations

As a result of the analysis of the telephone survey, the following five marketing messages/actions are suggested:

1. More than 85 percent of the aged 55 and above population indicated that they eat seafood. This is similar to previous studies, indicating that there is no prejudice for or against seafood in people aged 55 and above. Additionally, the analysis of who is most likely to consume seafood did not generate a strong model, indicating that it would be hard to predict or target the people who do not consume seafood. With these two factors, our recommendation would be to ***focus on market penetration (targeting existing consumers) over market development (finding new consumers)***. The one exception could be Hispanic consumers. Although they were less likely to consume seafood, those who did consumed it at higher levels than other ethnicities, indicating that those with a Hispanic background would be among the best to convert to consuming seafood.
2. Although few people knew what sustainable seafood was prior to the survey, there appeared to be considerable interest in the product. Further information is needed about the costs of producing sustainable seafood, and the specific willingness to pay, but ***the ability to market sustainable seafood appears to be an advantage***.
3. The nutritional benefits index was significant, indicating that those who were more aware about health usually consumed slightly more seafood. ***Further emphasis on the health benefits of seafood is likely to be effective as the 50+ age group becomes increasingly more concerned about nutrition***. Currently, 50 percent of the respondents indicate that they eat seafood because of nutrition and health. In addition, 36 percent indicated that the promotion of health benefits would cause them to consume more seafood.
4. People who indicated a willingness to try new seafood products ate more seafood. This indicates that ***efforts in product development bringing new products or forms of products to these people would be successful in increasing consumption, not just in displacing other consumption***. This correlates with over 100 respondents indicating that new packaging could increase consumption.
5. Many respondents in both the focus groups and in the survey indicated they would consume more seafood if recipes (35% in survey) and preparation information (31% in survey) were available to them. We therefore recommend that ***recipes and seafood preparation brochures and other information be made available to the public***. Additionally, 33 percent of respondents said that they would consume more seafood if knowledgeable seafood specialists were available. They also indicated a high level of trust in the person selling the seafood. Therefore, continuing efforts to train sellers to be more knowledgeable about seafood (and/or providing those sellers with recipes) is worth investigating. However, it is recognized that this could be an expensive proposition and would require cooperation from the grocery stores.

Table 1. County of residence of survey respondents

County of Residence	Number	Percent
Hillsborough	250	42%
Miami-Dade	115	19%
Palm Beach	232	39%

Table 2. Healthy nutrition behavior of respondents

	7	6	5	4	3	2	1	Don't Know / Refused
Reduce my sodium intake	22%	10%	17%	10%	11%	8%	15%	7%
Watch amount of fat consumed	22%	12%	18%	12%	12%	8%	11%	4%
Moderate sugar intake	21%	13%	19%	11%	10%	7%	15%	3%
Moderate red meat consumption	16%	12%	19%	12%	12%	12%	16%	3%
Cut back on snacks and treats	20%	12%	18%	12%	12%	10%	14%	2%
Avoid foods with additives and preservatives	17%	12%	19%	11%	11%	11%	14%	1%
* 7 = All the time and 1 = None of the time								

Table 3. Familiarity with seafood

	7	6	5	4	3	2	1	Don't Know / Refused
I am knowledgeable about the nutritional aspects of seafood	39%	15%	13%	13%	5%	4%	8%	3%
In general, I know a lot about seafood	27%	15%	20%	19%	6%	4%	8%	3%
I am very interested in the seafood product category	31%	13%	15%	13%	6%	6%	13%	4%